

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 11234082
 PUBLICATION DATE : 27-08-99

APPLICATION DATE : 13-02-98
 APPLICATION NUMBER : 10048831

APPLICANT : TOKO INC;

INVENTOR : SHIMIZU HIROSHI;

INT.CL. : H03H 9/145

TITLE : SURFACE ACOUSTIC WAVE DEVICE



ABSTRACT : PROBLEM TO BE SOLVED: To improve the strength and durability of an electrode of a surface acoustic wave device which is mounted on a substrate by the flip-chip bonding by providing a chromium layer and a nickel layer, formed on the surface of a chrome layer on the surface of an aluminum electrode pad and forming a gold electrode layer on the surface of the nickel layer.

SOLUTION: An inter digital electrode and a pad (aluminum film) 11 that is used for connection to an external circuit are formed on the surface of a piezoelectric substrate 10 of crystal, etc., in the processes of evaporation, etching, etc. A chromium layer 12 is formed similarly on the surface of the pad 11 as a 1st barrier layer, and a nickel layer 13 is formed on the layer 12 as a 2nd barrier layer. Then a gold layer 14 is formed on the surface of both layers 12 and 13, which are stacked on each other as an oxidation preventing film of both layers 12 and 13. The thickness of the layer 14 is made small compared with other layers. Then by forming a gold bump is formed on the surface of the layer 14, the adhesion force between the bump and an electrode pad is reinforced.

COPYRIGHT: (C)1999,JPO